

Professional Development Committee (PDC) Interim Report

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Reference
Key Number

400 INTRODUCTION

The Professional Development Committee (Committee) submits its Interim Report for consideration by the National Conference on Weights & Measures (NCWM). This report contains the items discussed and actions proposed by the Committee during its Interim Meeting in Jacksonville, Florida, January 22 - 25, 2006.

Table A identifies the agenda items in the Report by Reference Key Number, Item Title, and Page Number. An item marked with an “T” after the reference key number is an informational item. An item marked with a “D” after the reference key number is a developing item. The developing designation indicates an item has merit; however, the item was returned to the submitter for further development before any action can be taken at the national level. Table B lists the Appendix to the Agenda.

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Note: Report content is published as received with the exception of minor editorial and format changes.

**Details of All Items
(In Order by Reference Key Number)**

401 EDUCATION

401-1 I National Training Program (NTP)

Source: The Committee (2003)

Background: The Board of Directors established the Committee at the 2003 NCWM Annual Meeting in Sparks, Nevada. The first critical charge given to the Committee was to develop a national weights and measures professional development program in cooperation with its partners including:

- State and local weights and measures departments;
- Private industry at all levels; and
- Technical advisors from NIST Weights and Measures Division and Measurement Canada

The NTP will address the following tasks in order of priority:

1. The education and professional development of weights and measures officials and the promotion of uniformity and consistency in the application of weights and measures laws and regulations;
2. The education of industry personnel with regard to weights and measures laws and regulations, including all areas from device manufacturer to service technician;
3. Quality standards for weights and measures activities and programs;
4. Safety awareness for weights and measures-related activities; and
5. Development of a firm partnership with the state and local weights and measures departments, private industry at all levels, and the NCWM. It is critical that NIST Weights and Measures Division (NIST WMD) partner with the Committee and, where appropriate, provide technical advice. Measurement Canada is also encouraged to participate in Committee activities.

The Committee began developing the concept of a National Certification Program for weights and measures officials during the 2004 NCWM Annual Meeting. In December 2004 several Committee members met in Harrisburg, Pennsylvania, to further develop the Committee's overall strategic direction of a National Certification Program. The participants agreed that the NTP should take the following directions:

- The training responsibility remains with the state and local jurisdictions.
- Administrator training must be added to the curriculum.
- Training and structure used by agencies outside the NCWM should be explored and used as models.
- The Central Weights and Measures Association (CWMA) offered to assist the Committee in determining what knowledge and prerequisites are required for beginning and advanced inspectors.
- The Western Weights and Measures Association (WWMA) recommended course outlines for shorter training courses.

The strategic direction is summarized in Appendix A.

Discussion:

WWMA: Individual regional associations are encouraged to take it upon themselves to dedicate a portion of their annual meeting towards the National Training Program. This time should be spent developing at least one of the weights and measures core competencies defined by the NCWM PDC. The resulting document should be forwarded to the NCWM PDC in order to complete the overall project. To this end the WWMA PDC committed to the development of the retail motor fuel dispensers curriculum.

CWMA: State associations reported receiving comments from industry sectors that they would find it valuable to have the training expanded to include the addition of industry personnel. Focus should remain on establishing a training program for regulatory personnel, but inclusion of industry in training has merit since many jurisdictions report better and may improve overall compliance when industry receives education and training.

The Committee will forward a training model to the regional weights and measures associations. The committee appreciates the continued interest and support.

401-2 I Create a Curriculum Plan (Carryover Item 401-4)

Source: The Committee (2003)

Background: The Committee agreed the following steps must be addressed for the NTP to be viable:

- (a) Develop and maintain a curriculum plan in cooperation with our partners that establishes uniform and consistent training objectives for weights and measures professionals in all fields and at all levels.
- (b) Develop objectives of the curriculum plan representative of a consensus of our partners and organize those objectives by scope, sequence, and level of complexity to assist those developing the curriculum materials.

The development of a training program should follow the steps below:

1. Study training programs of outside agencies and state and local jurisdictions.
2. Establish knowledge goals for weights and measures officials and administrators.
3. Develop curriculum based upon the findings and results of the steps 1 - 2 above.
 - (a) Coordinate the development of curriculum materials to be used in the delivery of training (i.e., lesson plans, digital presentations, slide shows, testing guides, etc.) using a variety of formats (e.g., self-study, traditional instruction).
 - (b) Consider creating a network of interested parties to establish priorities, share training resources, foster cooperation to reduce redundancy, and promote uniformity and consistency.
4. Develop examinations, quizzes or tests based on the content of the materials developed under Item 3.
5. Gather and share information from trainers on highly effective techniques, visual aids and other materials that have been used to facilitate learning. Use as many of these resources as available.

The Committee reviewed the notes from the NIST-sponsored administrators' workshops held in Denver, Colorado, and Baltimore, Maryland, and plans to explore many of these ideas.

During the 2004 Annual Meeting, the Committee discussed the idea of using work groups to develop courses that could be used for self-study or for traditional classroom settings. The Committee agreed that the initial priority should be high profile devices (e.g., motor-fuel dispensers and retail computing scales). The Committee studied the survey results to focus on the membership's needs and desires.

There were several recommendations submitted by the regional associations. The CWMA commented that the Committee should draw upon other sources, both external and internal, for establishment of curricula. The WWMA recommended the Committee review current training courses on the NIST website at <http://www.nist.gov/owm> to establish and identify various levels of training. They also suggested the Committee review and update all existing NIST training courses and post them on the NIST website. The Northeast Weights and Measures Association (NEWMA) recommended the Committee set standards for education that include provisions for field tests.

During the 2005 Interim Meeting recommendations were made to develop course curriculum with specific learning objectives and development of tests to determine mastery of the learning objectives. Training responsibility to meet the objectives would rest with the jurisdictions. It was recommended that the Committee oversee development of the tests to be administered for each course. Upon successful testing, certificates would be issued. Protocol for preserving the integrity of the tests and the testing system would need to be developed.

Discussion:

NEWMA: The State of New York provided the PDC with a final draft curriculum for small scales. The draft is ready for comment. New York also provided a proposed training outcome hierarchy. The State of New York presented the CA Core Competency Model as a guideline to be considered by the Committee.

CWMA: PDC members are working on a framework for the RMFD curriculum and hope to have a draft for soliciting comments at the Interim Meeting. The draft will have the guidelines and curriculum framework with the training details the responsibility of the state conducting the training.

WWMA: Developing a curriculum plan is one of the most important components of a national training program. Individual regional associations should be encouraged to dedicate a portion of their annual meeting to this work. This time should be spent developing at least one of the weights and measures core competencies defined by the NCWM PDC. The resulting document should be forwarded to the NCWM PDC in order to complete the overall project. The WWMA PDC is working on a retail motor- fuel dispenser curriculum for comments at the NCWM Interim Meeting.

SWMA: The SWMA continues to support the work of the NCWM PDC in this important task. The SWMA PDC commits to , developing the curriculum for motor vehicle scales by its next Annual Meeting. (October 2006)

The Committee will post to the NCWM website: A Core Competency Model received from New York, the three curriculum segments that were developed by New York, and a short guidance memo on how to use the curriculum.

The Regional Committee responsible for developing the curriculum segment needs to focus on a level of competency expected of the entry-level inspector.

401-3 D Instructor Improvement (Carryover Item 401-7)

Source: The Committee (2003)

Background: One Committee goal is to work with all interested parties to improve the competence of instructors and the uniformity of delivery of the curriculum.

The Committee concluded there are two parts of an instructor improvement strategy. The first part is educating trainers in effective methods of instruction. A variety of courses and training methods are available from state, federal, and private sources to develop instructional skills and techniques. Jurisdictions are encouraged to seek out and send selected staff to participate in this type of training.

The second area of instructor improvement is to provide trainers with the knowledge of the technical aspects of all types of devices. The Committee believes that NIST WMD continued leadership and participation is a valuable asset in this area and recommends that WMD continue to provide the technical training for instructors. The Committee invites and looks forward to working with WMD as a resource to consult with trainers and to work with the Committee to keep the curricula current as changes to the Handbooks occur, new technologies are deployed, and emerging issues develop. While this is not an urgent issue, the item will be retained as a developing item.

Industry has continued to support and sponsor training on their new technology for weighing and measuring devices. NIST has assured the committee that they will continue their work towards providing technical training for the trainers.

Discussion:

WWMA: The NCWM PDC should also consider the NTEP laboratories and their personnel as a valuable instructional resource.

401-4 D Certification (Carryover Item 401-8)

Source: The Committee (2003)

Background: The Committee believes that an NCWM certification program should be developed based on the curriculum plan with measurable levels of competency.

The Committee agrees that weights and measures officials must pass written examinations to receive certification. Certificates could be presented at the annual meeting to administrators and weights and measures officials who complete training classes and pass the course examination. In 2004 then Chairman Dennis Ehrhart indicated the Board of Directors would consider requests to fund training. The Committee is exploring certification of weights and measures officials as a means to demonstrate competency. The WWMA and CWMA submitted extensive comments and recommendations regarding this item prior to the 2004 NCWM Annual Meeting. The Committee has designated this item as developmental.

At the 2005 Annual Meeting the Committee considered and agreed to include the following proposal on state-issued certification:

State-Issued NCWM Certification Proposal

Background:

The Professional Development Committee (PDC) strategic direction has established a plan for a certification program for individuals and programs. The PDC has been charged with developing an NCWM certification program based on the curriculum plan with measurable levels of competency.

A full certification proposal was developed and submitted for consideration at the NCWM 2005 Interim Meeting. Questions were raised over the availability of NCWM resources needed to maintain a full NCWM certification program. Feedback from the membership in attendance showed there was interest in development of the state-issued certificate of competency since the states already have responsibility for maintaining training records and are ultimately responsible for the competency of inspectors in their jurisdictions. This proposal is for a state-issued certificate based upon a national certification-testing program.

During the open discussion some members indicated they would prefer NCWM issue the certificates and the states be responsible for the training.

Implementation:

Step One: Each State Director will identify a State Certification Coordinator (SCC) for its state to work with the PDC and NCWM. The SCC would be the main state contact and collection point for materials and information related to certification. The SCC would be responsible for:

1. Assisting the PDC in developing:
 - a. Test questions (or recommending work group members who could)
 - b. Test protocol
 - c. Certification criteria
 - d. Certification templates
2. Implementing certification testing in their state
3. Maintaining confidentiality of testing and test materials
4. Scoring certification tests
5. Issuing state certificates

6. Reviewing their state's submitted questions annually for adherence to the handbook changes
7. Maintaining state certification files

Step Two: The PDC will establish work groups to identify core competencies and knowledge requirements for basic (beginning) and advanced (journey level) inspectors for a general W&M inspector, for specific devices and W&M disciplines as identified in the training outline already developed by the PDC. The PDC and SCC can work together to assist in establishing work groups for specialty areas to ensure the correct level of expertise.

Step Three: The work groups will develop certification tests and field competency verification methods to test the core competencies and knowledge requirements as established in step two. Allow members of the work groups to utilize a secure area of the NCWM website to conduct their work without having costly meetings or conference calls. Each work group would submit questions to be used in the development of the test that would demonstrate the core competencies and knowledge requirements. This will establish a pool of potential questions for the PDC and SCC to use in development of certification tests. Use the ISWM 900-Question model and others for "developing," "recycling" and "updating" test questions as needed. SCCs should review the questions they developed annually and update if necessary. This will ensure that as handbook requirements change, all questions will remain current and in agreement with the conference documents. Reviewing only a few questions should not be overly burdensome on any one jurisdiction or organization. Development of the tests must also include the testing minimums for certification of every test for each device and discipline for certification (i.e., must pass 75 % of the questions to be certified).

The PDC would maintain a master list of questions for each test to be given, who submitted each question, when it was last reviewed and then generate the test questions using a random selection method. The test would be changed annually. Once a test has been developed, the PDC would submit the test questions (along with the answers) to the SCC for their use in certification.

Step Four: The PDC will establish confidentiality, testing and field verification protocol for the tests to ensure the integrity of the test and testing validity are maintained. This is crucial given the wide scope of testing and the need to offer testing in every state. This ISWM testing protocol and other successful testing procedures should be studied to build on current successes. PDC or BOD determines what, if any, involvement the NCWM will have in the actual printing and issuance of certificates and what recognition, if any, the NCWM will give to certificate holders. The SCC in each state will be responsible for printing all testing materials and instructions, giving the tests, and grading the tests, the SCC must monitor to see that testing protocol is followed.

Certification program expected outcome: consistency of enforcement, uniformity, respect, integrity, and acceptance of end product. Inspectors will be able to compete in the marketplace for fair wages and be recognized as professionals in their field.

Other things to consider:

1. Each state must also ensure field competency along with certification.
2. Should certificates be required to be renewed?
3. Should there be a fee associated with certification as a revenue source or to cover the basic cost of administering the test?
4. Should study guides or workshops be developed as a revenue source for the NCWM or as increased value to NCWM membership and attendance at meetings?

Discussion:

CWMA: Certification is necessary for uniformity and professional development. The certification program should be for individuals. Accreditation of jurisdictions is a separate program that could be addressed at a later time. Certification testing could be administered by the state. NCWM issuance of certificates would carry a higher level of credibility and more prestigious recognition if given in conjunction with NCWM meetings. The development of both the training program and certification program could be effectively developed concurrently.

WWMA: The WWMA supports having the states meet the requirements established by the NCWM. After demonstrating competency the NCWM would be the appropriate entity to issue the certificate. By exposing weights and measures inspectors to standardized training methodology, this certification process will lead to uniformity. Per the implementation plan WWMA has identified the following State Certification Coordinators (SCCs). The WWMA, PDC recommends other regional associations assist the NCWM PDC by offering such a list.

Alaska	Mike Campbell	mike_Campbell@dot.state.ak.us
Arizona	Shawn Marquez	smarquez@azdwm.gov
California	Ron Flores	rflores@cdfa.ca.gov
Colorado	Jonathan Handy	Jonathan.handy@ag.state.co.us
Hawaii	William Pierpont	william.e.Pierpont@hawaii.gov
Idaho	Tom Schafer	tschafer@agri.idaho.gov
Montana	Al Page	(406) 841-2240
Nebraska	Don Onwiler	donwiler@agr.ne.gov
Nevada	Dave Walch	(702) 486-4690
New Mexico	Raymond Johnson	rjohnson@nmda.nmsu.edu
Oregon	Clark Cooney	ccooney@odo.state.or.us
Utah	Brett Gurney	bgurney@utah.gov
Washington	Bruce Fagen	wsdabruce@earthlink.net
Wyoming	Albie Mickelson	amicke@state.wy.us

The Committee recommends a written test and is considering that a field test component be added sometime in the future. Curriculum developers will need to create questions for certification as the training material is developed. Upon successful completion of the certification test, the NCWM will be the issuing authority for the certificate.

Each state must select an SCC and submit the name to the Committee.

The Committee is seeking input as to whether the NCWM members would like certificates for certification be issued based on individual device type or covering a broad range device category.

401-5 D Recommended Topics for Conference Training (Carryover Item 401-10)

Source: The Committee (2003)

Background: At the 2005 Interim Meeting, the Committee recommended a number of topics for possible training seminars, round tables or symposia that would be suitable for presentation at the 2006 National Conference.

They are:

- Risk-based inspections,
- Marketplace surveys,
- Auditing the performance of field staff,
- Device inspections using a sampling model, and
- Emerging issues.

Will Wotthlie, MD, volunteered to lead a session on auditing field staff.
Robert Williams, TN, volunteered to present their state's RMFD testing program.
Jerry Buendel, WA, volunteered to lead a session on marketplace surveys.

All members are encouraged to submit their ideas for topics to the Committee members and to volunteer to lead, present or moderate a topic.

The Committee suggested that Bill Sveum and Vince Orr's presentation, Net Content Control of Retail Products During Manufacturing, be added to the NCWM annual agenda as an educational session.

402 PROGRAM MANAGEMENT

402-1 I Safety Awareness (Carryover Item 402-3)

Source: The Committee (2003)

Background: In the past the Committee's responsibility extended to the identification of safety issues in the weights and measures field and included efforts to increase safety awareness.

At the 2005 Annual Meeting Past-Chairman Dennis Ehrhart recommended that the committee make training its highest priority. The Voluntary Quality Assurance Assessment program, the NCWM Associate Membership Scholarships, and Safety Awareness efforts were carryover items from the Committee on Administration and Public Affairs and not the new direction.

Jurisdictions should send their safety reports and issues to their regional safety liaison, who in turn forwards them to Charles Gardner, the NCWM Safety Coordinator. Charles recommends the reports or summaries of them be published in the NCWM newsletter. At the 2005 Interim Meeting a CD-ROM on safety produced for the U.S. Environmental Protection Agency was made available for review. The Committee will ensure that safety awareness is a part of every aspect of training for NCWM stakeholders.

Discussion:

CWMA: Posting of the safety report to the website is recommended. Electronic submission is desirable. Safety training should be routinely incorporated into the conference agendas. The incident and accident report could be printed in the conference documents and e-mailed to state directors annually to facilitate access, submission, and discussion at meetings. Several topics for safety presentations were suggested such as homeland security, preventing back injuries, and dealing with hostile situations.

No additional comments were received at the 2006 Interim Meeting. There were no incident reports this year.

402-2 I Standard Categories of Weighing and Measuring Devices (Carryover Item 402-4)

Source: Western Weights & Measures Association (WWMA) (2005)

Background: The Western Weights and Measures Association (WWMA) Administration and Public Affairs (A&P) Committee recommended that standard categories of weighing and measuring devices be adopted to facilitate development of technical standards, inspector training, data collection, and program management.

The final report of the *Survey of Inspection Statistics Collected by State Weights and Measures Programs [2002]*, conducted during mid-2003, observed the absence of standard categories for weighing and measuring devices was a serious obstacle to data collection. For example, the way weights and measures programs categorize scales by type, use, or capacity and capacity ranges often vary considerably. Retail motor-fuel dispensers are currently being counted either by dispenser, grade, or number of hoses or meters. The need for reliable weights and measures statistics is summarized in the final report conclusion as follows:

Accurate statistics would be helpful in many ways at both the state and national level. For instance, performance measures are difficult to develop without statistics. Also, work plans require accurate and detailed statistics. In addition, budget, staffing, and other elements of each state program demand statistics on inspection workloads. Finally, neither individual states nor the NCWM will be able to estimate and advertise the value of the nation's weights and measures programs unless reliable statistics are available.

To correct this problem, the WWMA has developed *Standard Categories for Weighing and Measuring Devices* and recommends that standard categories for weighing and measuring devices be adopted to facilitate the development of technical standards, inspector training, inspection data collection, and weights and measures program management.

At the 2005 Interim Meeting the Committee agreed this item should remain informational at this time because standardized categories of weighing and measuring devices have merit and should be considered in the future.

Discussion:

CWMA: The PDC should clarify the intended purpose of this list. For example, compiling information for inspection time data would be different from compiling a device count. Add hopper as an example under large-scale category. Add GM for Grain Moisture Meters and MD for Multi Dimensional Devices. Add MV as a designation for a vehicle LPG meter and leave MG to designate Meter, LPG for a stationary meter.

The NEWMA recommended use of the categories from Handbook 44 instead of recreating new ones.

The WWMA drafted the following recommendation for consideration by the Committee. The standard categories of weighing and measuring devices are based on capacity ranges rather than type or use. It is assumed that the inspection test procedures for scales and meters within these capacity ranges are generally similar. Weights and measures programs can adopt the recommended standard categories without changing the manner in which they presently keep records of device inspections by simply adding an extra data field.

NCWM DEVICE CATEGORY CODES

<u>DEVICE CODE</u>	<u>CATEGORY</u>	<u>CAPACITY</u>	<u>EXAMPLES</u>
SP	Scale, Precision	< 5 g scale division	jewelry, prescription scales
SS	Scale, Small	< 300 lb	retail computing scales
SM	Scale, Medium	100 lb to 5 000 lb	dormant, platform scales
SL	Scale, Large	> 5 000 lb	livestock, recycler scales
SV	Scale, Vehicle	>40 000 lb	vehicle, railway track scales
MS	Meter, Small	<30 gal/min ¹	retail motor fuel dispensers
MM	Meter, Medium	30 gal/min to 100 gal/min	loading rack, vehicle-tank meters
ML	Meter, Large	>100 gal/min	agri-chemical meters
MF	Meter, Mass Flow	All	heated tanks of corn syrup (soft drinks)
MW	Meter, Water	All	water sub-meters for mobile homes & apartments
MG	Meter, LPG	All	propane sales
MT	Meter, Taxi	All	taximeters
DT	Device, Timing	All	clocks in parking garages
DL	Device, Length Measuring	All	cordage meters
GM	Grain Moisture Meter	All	
GA	Grain Analyzer	All	
MD	Multiple Dimension Measuring Device	All	

¹ Retail motor-fuel dispenser counts should be based on meters except that mid-grades should be added for blenders.

Two-letter device category codes could be employed to categorize devices in weights and measures jurisdictions for reporting to the NCWM during annual surveys. Otherwise, the data collection procedures already in place would be unaffected. It would be helpful also to add the two-letter device category code to inspection reports.

Other measuring devices (e.g., MFM, LPG, LMD, etc.) may not require capacity-based categories like scales or liquid measuring devices.

The Committee will make the following changes to the NCWM Device Category Code table: SS Scale Small <300 lbs, and add GM for Grain Moisture Meter, GA for Grain Analyzers and MD for Multiple Dimension Measuring Devices.

402-3 D PDC Publication

Source: The Committee (2005)

Discussion:

The Committee recognized that many aspects of their work would need to be documented and presented. The Committee and Board should consider the publication of a handbook or similar document.

The Committee recommends creation of a PDC document archive. NCWM will maintain the archive, and the Committee chair will keep a copy, which will be forwarded to the new chair.

Celeste Bennett, Michigan, Chair

Kenneth Deitzler, Pennsylvania

Agatha Shields, Ohio

Richard W. Wothlie, Maryland

C. Gardner, New York, Safety Liaison

Gary Lameris, Hobart Corporation, Associate Member Representative

Linda Bernetich, NCWM Staff Liaison

Professional Development Committee

Appendix A

Strategic Direction for the Professional Development Committee

The Committee developed their strategic direction to define its roles and responsibilities to the NCWM and the weights and measures community. The Committee members wrote principles to guide them in their deliberations and defined four main areas to focus their efforts. The Committee recognizes that its direction and responsibilities may be changed by the Board of Directors.

The guiding principles of the group were:

- Keep things simple,
- Develop programs that are realistic and achievable,
- Minimize redundancy and administrative tasks,
- Recognize that no one size fits all, and
- Meet the needs of W&M officials, service companies, industry and manufacturers.

The four main areas for focusing their efforts were:

National Training Program – The focus of the national training program would be to increase technical knowledge, strengthen credibility and improve the professionalism of the individual weights and measures official. A strong national training program will work to promote uniformity across the nation.

National Certification System – A national certification system would be developed to recognize or accredit weights and measures programs as competent or capable. The program would include requirements around individual training, proper test standards, use of national handbooks and a data gathering system.

Conference Training Topics – The Committee would be the focal point for gathering and recommending workshops or symposia on leadership, management and emerging issues to be presented during the annual conference. These topics would provide a forum for the exchange of ideas and discussion of changes in the marketplace.

Uniformity of Data – The Committee would work to develop standard categories for devices and inspection areas so that such things as the number of devices, compliance rates, frequency of inspection and other areas could be compiled and compared at the national level. These statistics could be used to benchmark organizations and to communicate the value of weights and measures to the public and to decision makers (see Item 402-4).